# SMEs in the Nuclear Supply Chain in Cumbria

Professor Frank Peck

**Presented to the Wales Labour Market Summit II:**
**Comparing policy interventions to challenge 'business as usual'**
14th September 2016 - Bangor University

# SMEs in the Nuclear Supply Chain: Structure of presentation

- Policy context (local versus national)
- Local impacts of changes in procurement
- SMEs in the supply chain: barriers and enablers to engagement in the supply chain
- SME competitiveness in nuclear supply chain

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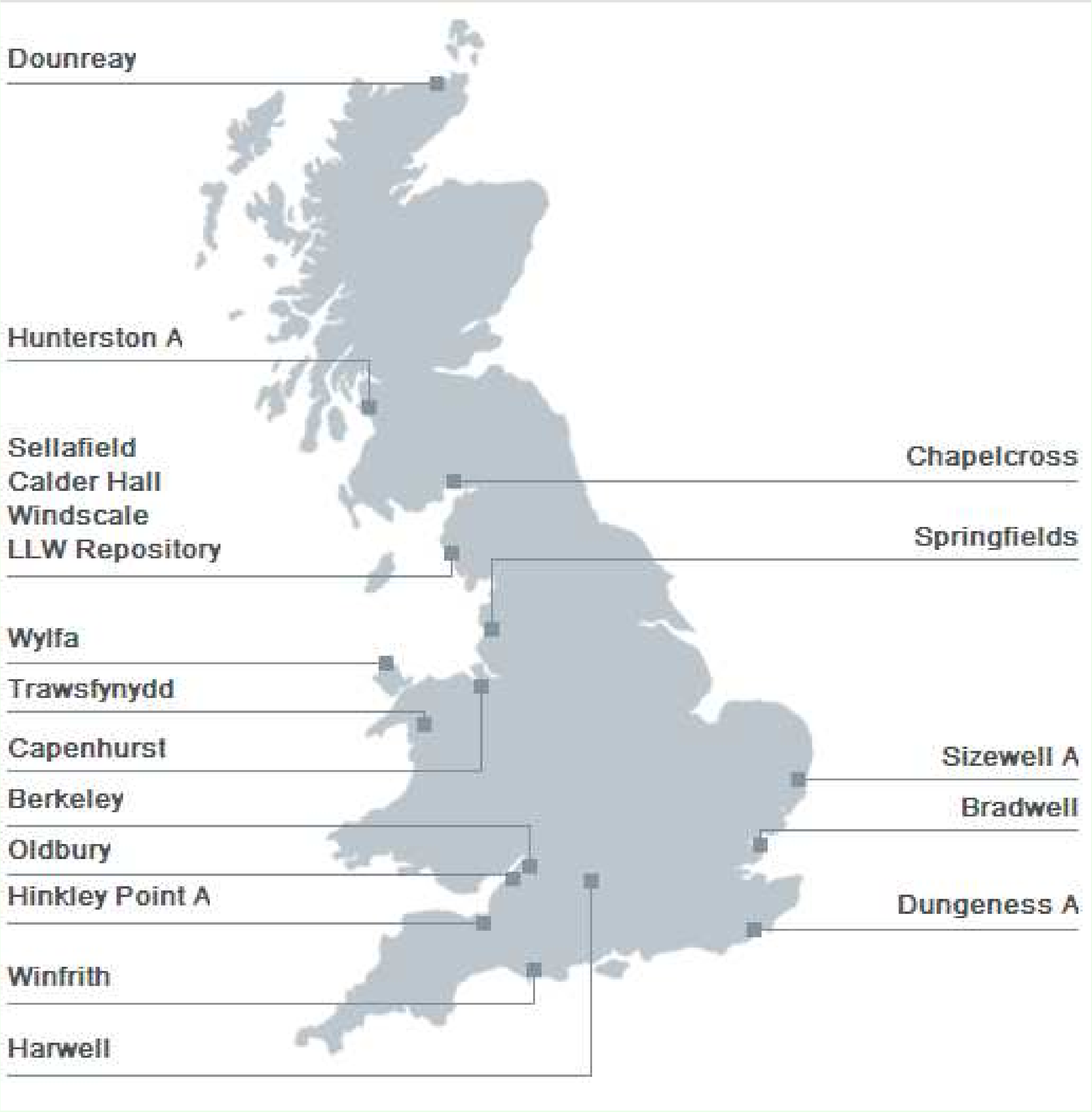
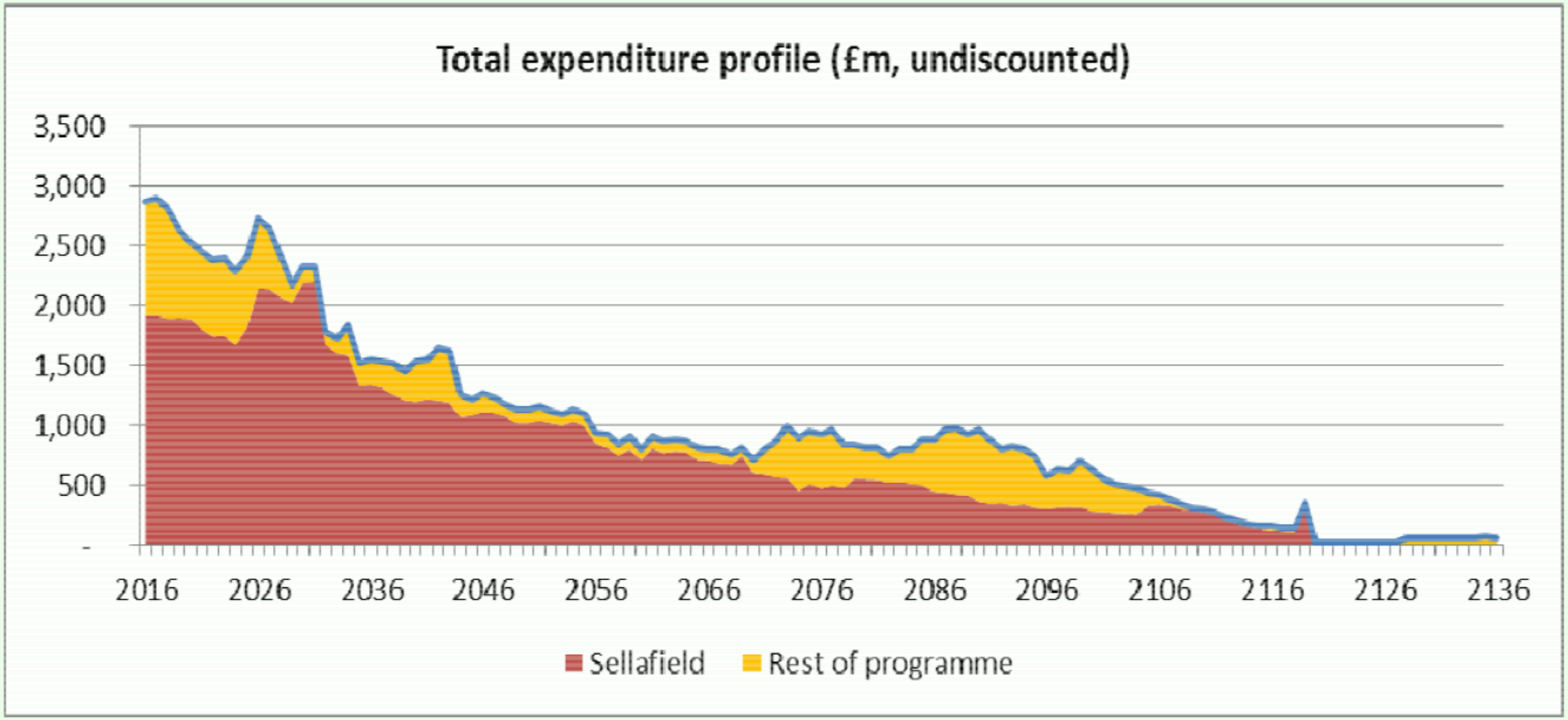

Dounreay
Hunterston A
Sellafield
Calder Hall
Windscale
LLW Repository
Wylfa
Trawsfynydd
Capenhurst
Berkeley
Oldbury
Hinkley Point A
Winfrith
Harwell
Chapelcross
Springfields
Sizewell A
Bradwell
Dungeness A

NDA Estate

**Nuclear Decommissioning Authority**
Annual Report and Accounts 2015/2016

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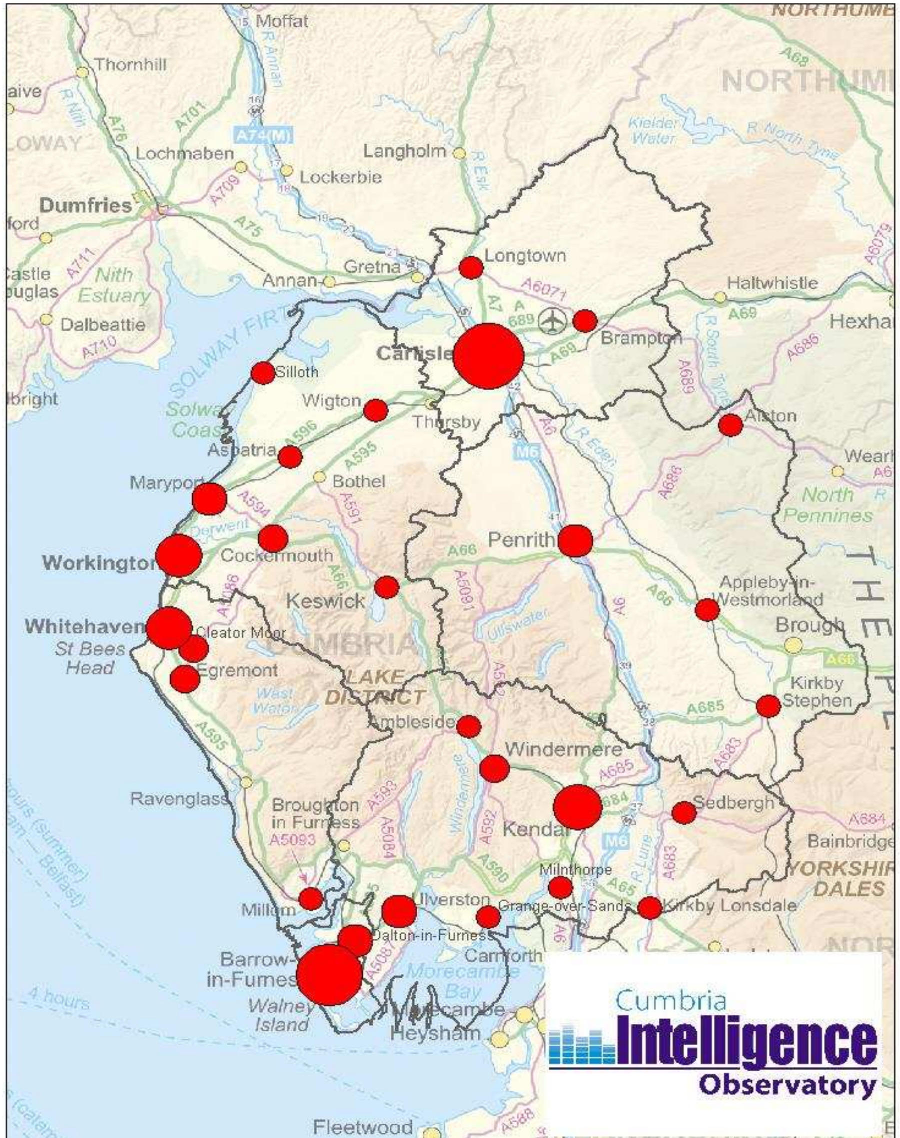




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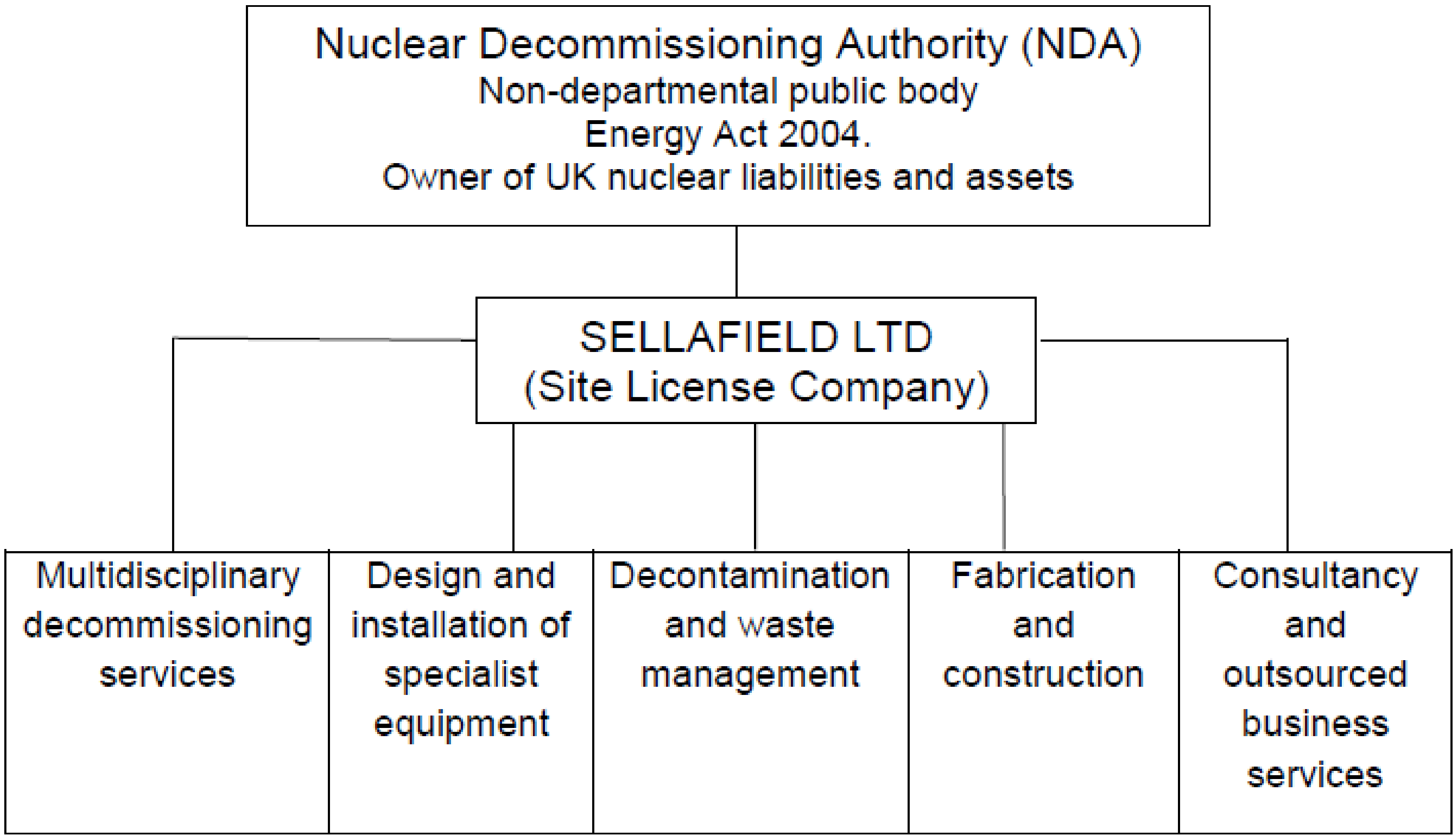
# Sellafield Ltd

- Sellafield activities
  - Reprocessing of nuclear fuels (THORP, MOX plant (closed in 2011)
  - Nuclear waste treatment (facilities for encapsulation, vitrification)
  - Waste management – long term storage
  - Decommissioning of nuclear facilities
- Sellafield site
  - Civil nuclear industry since 1950s - nuclear legacy
  - 1,300 buildings within 6 sq km
  - Circa 10,000 workers employed directly

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# Policy context - local scale

- Long-standing association between nuclear industry and West Cumbria in particular;
  - Decades of commitment to policies designed to foster the socio-economic future of communities
  - Investment in urban redevelopment (Whitehaven)
  - Investment in economic diversification – Westlakes Science and Technology Park
  - Investment in community facilities and social life
  - Still very significant economic, social and political influence on operations at Sellafield

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## The Importance of Socio Economic Contribution

- Sellafield Ltd and its tier 2 contractors responsibility
- Creation of a thriving local economy
- Attractive environment to live and work
- Self sustaining growth
- Responsive capable pool of skills, suppliers and people retention

A Nuclear Management Partners company operated under contract to the NDA

Sellafield Ltd

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**Slides taken from "Sellafield Ltd and its Supply Chain Socio-Economic Contribution" Keith Case, Commercial Director, Sellafield Ltd.**

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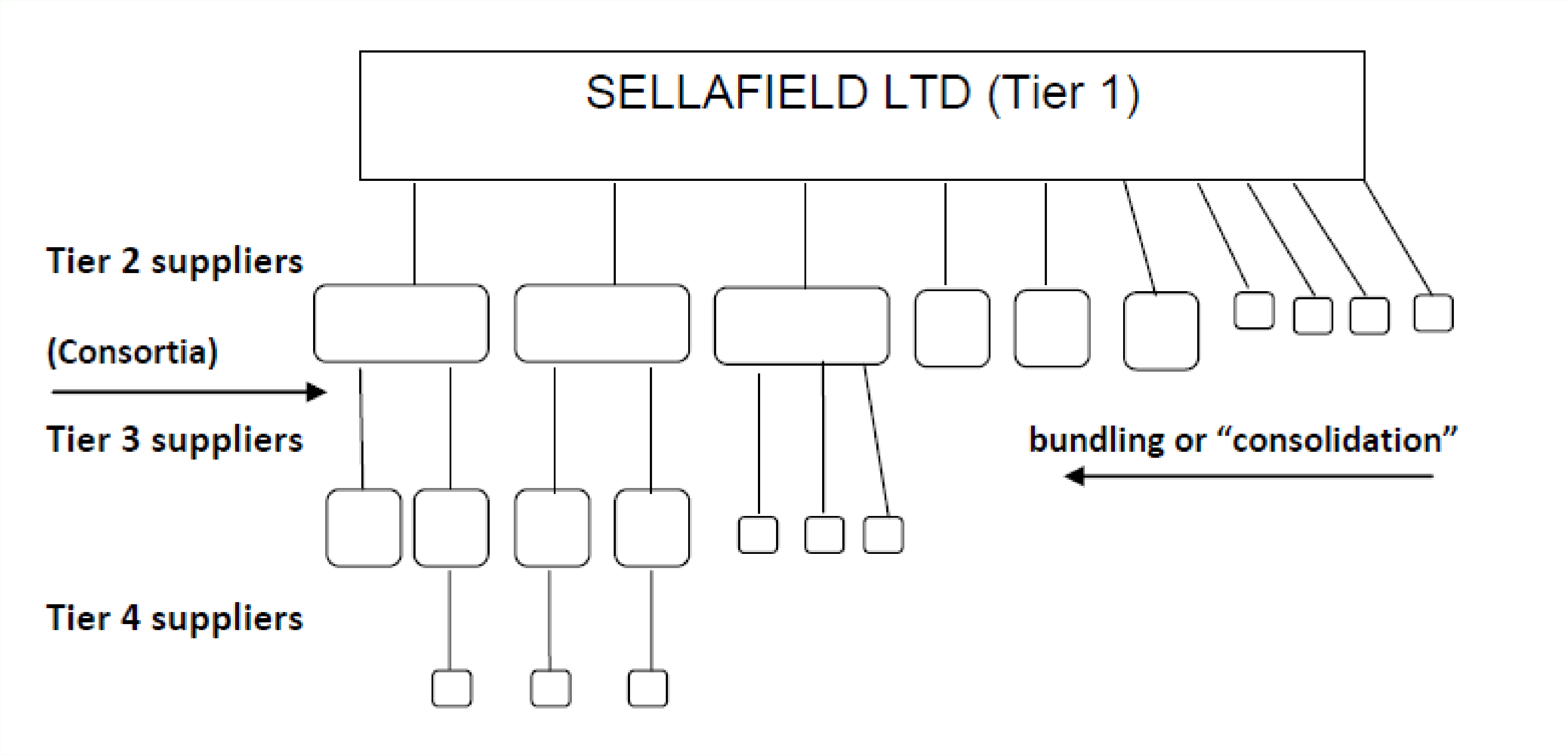
# Our Driving Force to Support Socio Economics

- Over 10,000 direct jobs
- Several thousands of indirect jobs
- 30% of our supply chain spend is retained in Cumbria
- Skilled pool of local labour
- Our commitment to enhanced support to socio economics

- Long Term Frameworks create stabilisation and long term planning
- Engagement process to align our contractors with key stakeholders to deliver approved socio economic plans with accountable KPIs

We all have a role to play in delivering joint values aligned to Britain's Energy Coast

# Change in the supply chain



# CRED Research on supply chain

- 2011-12 study - 23 in-depth interviews with senior managers of selected national and international firms (9) and SMEs (14).
- Conducted May-July 2011 mostly at premises in West Cumbria - themes covered:
  - Company structure and specialisms
  - Nature of contracts with Sellafield
  - Knowledge assets and competitive advantage
  - Organisation and method of delivery
  - Supply networks and suppler relations
  - Non-Sellafield contracts and diversification
- Follow-up study 2014 – In-depth interviews with12 SMEs very experienced in nuclear industry – design engineering, decommissioning, specialist equipment

# 2011-12 Survey firms by type of business

| | MNCs and subsidiaries | UK National firms | Local suppliers | Total |
|---|---|---|---|---|
| **Tier 2 firms** | 6 | 1 | 5 | **12** |
| **Tier 2/3 suppliers** | 0 | 0 | 3 | **3** |
| **Tier 3/4 suppliers** | 1 | 1 | 6 | **8** |
| | **7** | **2** | **14** | **23** |

# Table 4: Survey firms by product/service

| | Tier 2 firms | Tier 2/3 suppliers | Tier 3/4 suppliers | Total |
|---|---|---|---|---|
| **Multidisciplinary decommissioning** | 6 | 1 | 0 | **7** |
| **Design and installation of specialist equipment** | 4 | 0 | 2 | **6** |
| **Decontamination and waste management** | 2 | 0 | 0 | **2** |
| **Fabrication and construction** | 0 | 1 | 5 | **6** |
| **Consultancy** | 0 | 1 | 1 | **2** |
| | **12** | **3** | **8** | **23** |

# Experience of SMEs 2011-14

- Impacts of recent changes in Sellafield supply chain
  - Varied experience – some still winning nuclear work
  - Increased challenge in getting contracts at Sellafield
  - Procurement systems "overwhelming" for SMEs
  - Contracts not packaged for SMEs – large/complex
  - Collaboration? Belief that this negates a key competitive advantage of SMEs – flexibility and innovation

# Experience of SMEs 2011-14

- Relationships with T2 Suppliers
  - Some firms engaged in Consortia – unique products or specialist knowledge that cannot be found elsewhere in a timely fashion
  - Others experience difficulty – closed off
  - Belief that T2s prefer to internalise work or share it with other large firms – assumption that capability is related to size
  - Perception that high value-added work leaks to other regions while local spend is mainly low value

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# Experience of SMEs 2011-14

- Diversification: nuclear and non-nuclear
  - Nuclear markets – examples of effective diversification to other NDA estate, France, Japan and optimism about India and China
  - Some SMEs have not pursued diversification – "enough work at Sellafield"…. "Sellafield knowledge too specific to West Cumbria"
  - Non-nuclear diversification now a higher priority than before – oil and gas, renewables, chemicals

# Impacts of Change in Procurement for SMEs: Summary

- Geographical - T2 clients may have local base but not necessarily local decision-makers.
- Social - networks disrupted with consequence for levels of trust; also job-rotation in MNCs.
- Organisational – Complex negotiations to form consortia. Some SMEs feel excluded; technical / commercial / capacity reasons.
- Institutional - norms, customs, behaviours differ - attitudes to risk, project management, understanding of innovation, entrepreneurship
- Cognitive - increased segmentation of knowledge and understanding between firms in the supply chain.

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# Recent National Policy Context and SME Growth

- Concerns over “value to taxpayer” and efficiency of procurement – process of consolidation of procurement implemented since circa 2000-2005.
- More recently, UK Coalition SME Growth Agenda to increase spend channeled through SMEs to 25% (Cabinet Office 2011).
- Direct spend only – DECC very low (1.9% in 2012-13).
- So, interest in indirect SME spend – estimated at 11.1%
- Target for 2015 set at 19%

# Table 9: Local SMEs Knowledge assets and competitive position (a)

| Knowledge Asset | Significance for competitive position | Sources and strategies to acquire |
|---|---|---|
| Scientific | Type A SMEs with technical specialism (electrical equipment design/supply power engineering)<br><br>Type B either not relevant or considered useful; to know but not essential | Type A SMEs – in house expertise graduate recruitment |
| Technical | Vital for most SMEs. Skilled trained and certificated workers (available and on-site) | Major efforts to hoard key workers to retain skilled and certificated people<br>Apprentice schemes and significant ongoing investment in technical training and industry standards |
| Commercial | Major area of change:<br>Shift from informal to formal<br>Move away from trust-based to system-based tendering<br>Move towards larger and longer contracts | Can no longer rely simply on track record and past relationships<br>Acquire skills by engaging consultant, recruiting new specialists and internal reorganisation and training |

# Table 9: Local SMEs Knowledge assets and competitive position (b)

| Knowledge Asset | Significance for competitive position | Sources and strategies to acquire |
|---|---|---|
| Networking | Vital but subject to reconfiguration<br>Formerly, relationships with Site Licensee (Sellafield Ltd) and local business partners/suppliers<br>Latterly, engagement with existing and new T2 MNCs | Meet new challenge by networking with new T2 MNCs<br>Pressure to improve approaches to marketing directed at T2 MNCs. |
| Site | Vital but needs to be embedded in key workers and certificated work-force on site | Labour hoarding on-site at Sellafield and in key areas of the firm |
| Community | Important due to special nature of relationships in the industry. A useful though not critical determinant of competitiveness | Recognised as a useful lever in securing subcontracts from T2 MNCs<br>Built into some tendering processes |
| Legal | Industry specific (nuclear sites) necessary but not sufficient; Sellafield-specific requirements a vital source of advantage | Important part of skill base that needs to be retained by investment in training and induction and for some, maintenance of in-house health and safety managers |

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# Widening the discussion

- Interactions between local SMEs and global companies in large scale infrastructure projects (energy, transport, utilities).
- Overcome information gaps / marketing deficits – directories, one-off events.
- Organisational barriers – appropriate procurement for SMEs; regulation of consortia.
- Institutional gaps – short term compliance with socio-economic requirements; longer term behavioural change in both SMEs and MNCs.

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